



REMARKS

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This patent application presently includes Claims 1-17, all of which stand rejected. A declaration under 37 C.F.R. 1.132 is submitted and all rejections are respectfully traversed.

Claims 1-17 were rejected over Steinwand or Reznik in view of the "prior art" found in GB1004522 and GB 1228175 and Hsie et al. This rejection is respectfully traversed. Neither Steinwand, nor Reznik, nor any of the other references, nor any combination thereof renders the present claims obvious. Moreover, it is noted that the examiner is now asserting an improbable combination of no fewer than four references to arrive at the rejection. All of this, without any motivation for combining even two.

The Claims Exclude the Steinwand Hydroxide Process

The examiner's only basis for continuing to assert Steinwand is that the claims "do not exclude the teaching of the use of hydroxide." This is clearly not so. The Steinwand patent discloses a method for impregnating whole grapes with a sugar syrup under heat, while avoid disintegration of the grapes. The process involves subjecting the grapes to the hydrolyzing action of a sodium hydroxide solution, which modifies then "so that the cellulose, fibrous and starchy parts of the fruit will become modified ... without checking, cracking or splitting

the skin" (column 1, lines 37-42), and puncturing the skin and pulp, to permit impregnation of the grapes with the syrup under heat. In other words, Steinwand's is hydroxide process modifies the fruit *internally*, without modifying its external structure. This is exactly the opposite of what the claims require. In other words, performing the hydroxide process already causes internal changes (before anything else is done) which brings the product outside the claims.

Response to Rejections

This response is accompanied by the declaration of David S. Reid. Dr. Reid is a Professor in the Department of Food Science and Technology at the University of California, Davis (Reid Declaration, Paragraph 1). He has been teaching scientists and engineers for 20 years and is quite familiar with the level of skill of students at the undergraduate and graduate level (Reid Declaration, Paragraph 2). After reviewing the present patent application and the cited references, Dr. Reid is of the opinion the level of skill of a person of ordinary skill in the field of the subject matter of the patent application is that of an ordinary scientist or engineer with a bachelor's degree in food science or technology (Reid Declaration, Paragraph 3). Dr. Reid is therefore in a unique position to be able to assess how those with that level of skill would view the cited references and the present invention.

The present invention relates to a process for introducing water activity controlling solutes into dried fruit. Claim 1 includes the steps of:

- (a) provided dried fruit of a moisture content between 5 to 40% or more;
- (b) disrupting the structure of the fruit while maintaining the integrity thereof;
- (c) reacting with the fruit a solution containing one or more water activity controlling solutes, and drying to a desired moisture content.

The Steinwand patent relates to treating whole grapes and not dried fruit with a moisture content of 5 - 40%. Regarding this difference, Dr. Reid observes (Reid Declaration, Paragraph 4):

The person of ordinary skill would understand that this is not equivalent to a dried fruit of similar a_w , since there are characteristic changes in the chemistry of fruits consequent upon drying which do not occur in fresh fruits. An example is the difference between a plum and a dried prune, or a grape and a raisin.

and (Reid Declaration, Paragraph 8):

Those of ordinary skill in the art would conclude that the Steinwand patent, concerned with the maintenance of some fresh-like character in preserved fruits, is in a field different from the [present invention], to wit it deals with

fresh fruits, rather than dried fruits, products with markedly different characteristics.

With the Steinwand patent involving this major difference, there is no reason to believe that those skilled in the art would look to it for anything relevant to the present invention. Indeed, it is quite evident that Steinwand does not even constitute analogous art. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Since neither of these requirements was met in the present instance, those skilled in the art would not look to it or anything pertinent to preserving dried fruits, and the examiner may not rely on the Steinwand patent. This, alone, is a sufficient basis for the obviousness rejection over Steinwand to fail.

Steinwand teaches soaking fresh fruit in sodium hydroxide (see page 1, column 2 lines 28-33), where the hydroxide solution is poured on to the fresh fruit, particularly grapes, for a period of from 10 hours up to several days. Following this extensive alkali treatment, the fruit of Steinwand is then punctured with a puncturing roller as shown in Figure 3 having a plurality of spike projections extending radially from the roller surface. Steinwand teaches at page 3, column 3 lines 45-60 that puncturing the fruit and alkali treatment are essential to the

operation of the Steinwand process. Accordingly Steinwand teaches that fresh fruit must be punctured and treated with hydroxide to obtain fluid uptake.

Thus, even overlooking, for the purpose of argument, that those skilled in the art would never look to Steinwand for anything pertinent to the subject matter of the present invention, it could hardly be argued that the Steinwand process maintains the integrity of the fruit. Indeed, it requires both the skin and pulp of the fruit to be punctured. This can be seen in Fig. 3 of the patent, where the punctures extend at least half way into the body of the grape, so its integrity is clearly not maintained. Accordingly, the disclosure of the Steinwand patent is not only inapposite to the present invention, but lacks major claim limitations. In fact, Steinwand teaches exactly the opposite of this particular limitation. Accordingly, claim 1 is not obvious over Steinwand and is believed to be allowable thereover.

The Reznik patent's aim is not to lower the water activity of dried fruit, but instead to increase the water activity by the addition of water via a rehydration process. Dates are fissured using a fissuring roller and then vacuum impregnated with water to increase the moisture content of the dates (see page 1, column 2 lines 25-33). Fissuring of the skin enables air to be rapidly drawn out of the fruit allowing ready vacuum impregnation with water (see page 2, column 3 lines 10-21). This occurs when air is reintroduced to the enclosure and the

resulting pressure causes water to be forced into the dates in place of the air which was drawn out.

Regarding Reznik, Dr. Reid observes (Reid Declaration, Paragraph 9):

To one of ordinary skill in the art, the Reznik patent describes the processing of a dried fruit by introducing cracks on the surface, but it would be understood that the purpose is to *enhance rehydration*, and provide improved eating quality by such increased moisture content. Reznik does not claim to enhance eating quality under low moisture conditions. In this way the product would be understood to be different from that of the present invention, which is intended for consumption under low-moisture conditions. The final product of the Reznik patent does not have long term stability. That characteristic is possessed by the original date. As those of ordinary skill in the art would understand, the Reznik process is intended to render the stored date more suitable for consumption, not to produce a stable final product.

Thus, the Reznik patent relates to processing dried fruit for an entirely different purpose, and it achieves a different result. The examiner has offered no explanation why those skilled in the art would ever use Reznik for an undisclosed purpose. "The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 23 U.S.P.Q. 2nd 1780, 1783 (Fed Cir. 1992).

It is also noteworthy that the Reznik patent is entirely dependent on the use of a vacuum to draw water into the dates, that is entirely unnecessary in and teaches away from the present invention. A reference should be considered

as a whole, and portions arguing against or teaching away from the claimed invention must be considered. *Bausch & Lomb, Inc. v. Barnes -Hind/Hydrocurve, Inc.*, 796 F.2d 443, 230 USPQ 416 (Fed. Cir 1986). Considering Reznik as a whole, the present process is not obvious over Reznik and is believed to be allowable thereover.

Even if there were some bases for making the combination of Steinwand and Reznik that combination still does not avoid the shortcomings of the references as the basis for an obviousness rejection (discussed above). Therefore, the present claims are also believed to be allowable over the combination of Steinwand and Reznik.

The two British patents relate to processes for the production of quick cooking pulses, particularly peas, produced from fresh mature pulses. The whole basis for the British patents is that mature pulses, particularly peas, are harder and slower to rehydrate and cook compared to peas which are harvested at an earlier stage. The British patents allow previously rejected peas to be fully utilized in the production of dried peas for use in soups, dinner side dishes, and the like.

According to the British patents, pulses, particularly peas, of high maturity are impregnated with a solution of hydrophilic material and are subsequently subjected to a drying operation (see for example GB 1004522 at page 1 lines 23-31 and claim 1). In one aspect of the disclosures, the fresh peas are perforated using pricking means (see Example 2) of GB 1004522.

Applicant believes that the Examiner has confused the raw material, that is the fresh pulses, of the British patents with dried pulses. Fresh peas comprise about 78% moisture. The product of the British patents require rehydration and cooking to be edible (see Example 1 of GB 1004522 at lines 32-46).

With respect to the British (Unilever) patents, Dr. Reid observed (Reid Declaration, Paragraph 7):

To those of ordinary skill in the art, the Unilever patents describe a dehydration process, which aims to increase the rate of rehydration. They would understand that the purpose of the skin rupture is to enhance moisture removal and that the purpose of the added humectant is to enhance the rate of rehydration. They would appreciate that the patent is not concerned with the properties of the dried product, only with the rapidity of drying, the rapidity of rehydration, the production of acceptable consumer properties for the rehydrated product.

Thus, the British patents, too, are addressed to a different problem than the present invention and would not be looked to by those skilled in the art when considering the problem addressed by the present invention.

The Hsieh patent is directed to processes for infusing high levels of humectants, such as glycerol, into dried fruits, particularly raisins. In the Hsieh process dried fruit is tumbled with high concentrations of glycerol so as to coat the surface of the raisins (see Example 1-at column 9). The dried fruit and humectant, particularly glycerol, are left to stand until the liquid humectant has infused into the dried fruit.

Dr. Reid has the following observation with respect to Hsieh (Reid Declaration, Paragraph 10):

The product of the Hsieh process would be understood by those of ordinary skill in the art to be similar to that of the [preset invention], in that it is a moist, succulent dried fruit of lowered a_w , containing added humectant which provide moistness and tenderness without increasing the a_w to a level where microbiological stability is compromised. The [present invention] would be understood to differ, in that it describes a process in which the rate of incorporation of the humectant is greatly enhanced.

So, this is one instance in which the results of the present invention were sought, yet the unique steps of the claims were overlooked, and the advantages of the present invention were not gained.

We will now consider the various additional combinations suggested by the examiner. As explained, **the combination of references put forward by the Examiner would not be made by a person of ordinary skill in the art, and further teaches away from the invention as claimed.**

Combination of Steinwand with British patents

The fresh fruit of Steinwand, particularly grapes, and the use of this material to produce glacéd or candied fruits according to Steinwand, is a completely different technical field to the British patents concerned with production of dehydrated pulses, particularly peas, which are shriveled dehydrated vegetable products treated to make them quick cooking in boiling water by the

consumer. A person skilled in the art would not combine the incompatible teachings of Steinwand with the British patents.

The object of Steinwand is to prevent fruit from cracking and shrinking during treatment with sugar syrup (see column 1 lines 10-15), whereas the British patents are concerned with dehydrating and shrinking the fresh pulses.

The essentiality of the combination of puncturing the grapes of Steinwand in combination with hydroxide treatment would have to be included in any combination with the British patents. Accordingly, Steinwand teaches, for example at column 2 lines 45-60, that puncturing grapes and treatment with sodium hydroxide is absolutely necessary for impregnation of the grapes with sugar syrup under heat. In contrast, the British patents teach that fresh pulses, particularly peas, are impregnated with a hydrophilic material, including sucrose, without any hydroxide treatment. Hence, Steinwand and the British patents teach opposite processes.

Combination of Steinwand with Hsieh

These patents are again in completely different technical fields, Steinwand being concerned with treating whole fresh fruits, particularly grapes, whereas Hsieh is concerned with processes involving dried raisins.

Whereas the fresh grapes of Steinwand are subject to a combination of hydroxide treatment followed by puncturing, the dried fruit of Hsieh is tumbled

with a high percentage of a humectant, particularly glycerol. The processes are different, the objects are different, and the results of both processes are different.

Combination of Reznik with British Patents

Whereas Reznik describes an apparatus for hydrating dates, the British patents dehydrate fresh pulses, that is fresh peas. Again, the technical field is completely different and the processes are different. The fissuring of the skin of dates followed by vacuum hydration forcing water into the dates, is the completely opposite process to dehydrating, that is removing water from fresh peas as in the British patents. A vacuum impregnation of water to rehydrate fruit, particularly dates, is a completely nonsensical combination with processes for producing dried peas according to the British patents.

Combination of Reznik with Hsieh

Whereas Reznik increases the water activity of dried dates via a vacuum rehydration process, Hsieh lowers the water activity of dried raisins by infusing into the raisins or other dried fruits a liquid humectant, particularly glycerol. Whereas Reznik vacuum impels water into dates, Hsieh simply tumbles dried raisins with the humectant glycerol. In combining these references, a person skilled in the art would not know whether to use water or glycerol, or how the vacuum impelling step of Reznik could be combined with the gentle tumbling of

raisins in glycerol according to Hsieh. In any event, the combination of these references does not suggest the presently claimed invention.

Dr. Reid's observation as to combining the references should come as no surprise (Reid Declaration, Paragraph 11):

While combining parts of the ... other patents can duplicate the methods of increasing the rate of incorporation of the humectant, the purpose of these partial processes within the other patents would be understood by those of ordinary skill in the art to differ significantly from the purpose in the [present invention]. I do not believe that a person of ordinary skill in the field would find the claims of the Byron process obvious from reading the teachings of the Steinwand, Reznik and Unilever patents.

* * * *

The Hsieh patent describes a time-consuming process. The teachings of the Byron claim, which result in a rapid process, would be considered unobvious by one of ordinary skill in the field.

The undersigned must object to the Examiner's entire approach to making the obviousness rejections in the present instance. In the Office Action, the Examiner has improperly combined disclosures from a substantial number of references to make the present rejections. No rejection is based on the combination of fewer than three to four references. Basically, the examiner has looked at the disclosure of the application and has arbitrarily selected features from the cited references to make the rejection (As shown above, even the improbable combinations suggested by the examiner still do not teach or suggest the invention). Apparently, the examiner has overlooked the requirement that for

references to be combined, "there must be some reason, suggestion or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge cannot come from the applicants' invention itself." *In Re Oetiker*, 24 U.S.P.Q. 2d 1443 (Fed. Cir. 1992). It is error to reconstruct the patentee's claimed invention from prior art by using the patentee's claim as a "blueprint" when prior art references require selective combination to render obvious a subsequent invention. There must be some reason for the combination other than the hindsight obtained from the invention itself. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132 (Fed. Cir. 1985).

Indeed, the only disclosure for any of the combinations made by the examiner is the present patent application itself. As stated by the CAFC in *In Re Fritch*, 23 USPQ 2d. 1780 (Fed. Cir. 1992):

[I]t is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious... This court has previously stated that "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

The CAFC has also stated that:

As in all determinations under 35 U.S.C. §103, the decision maker must bring judgment to bear. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.

In Re Gorman, 18 USPQ 2d. 1885 (Fed. Cir. 1991).

The examiner's hindsight approach is evidenced by the fact that she has arbitrarily combined the references without even alluding to the slightest suggestion in any of them that such combination should be made or that it would be of any benefit. It might very well be asked how the present invention could be considered obvious when there are substantial benefits derived from it and none of the references even suggests it. "We do not pick or choose among the individual elements of assorted prior art references to recreate the claimed invention, but rather, we look for some teaching or suggestion in the references to support their use in the particular claimed combination." *Symbol Technologies, Inc. v. Option, Inc.*, 19 USPQ 2d. 1241 (Fed. Cir. 1991). It is by now well settled that obviousness cannot be established by combining the teachings of prior art references to produce a claimed invention, absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montifiour Hospital*, 221 USPQ 929 (Fed. Cir. 1984).

In view of the foregoing, it is believed that any obviousness rejection based upon the examiner's improbable combinations of reference improper and must be withdrawn.

In view of the foregoing, there can be no doubt that the rejection of claim 1 is without basis and should be withdrawn. Claim 1 should be allowed. Claim 2 has limitations similar to claim 1 and is allowable over Steinwand, Reznik, Hsie, the British references, or the combination thereof for the same reasons set forth above.

The remaining claims depend from claim 1 or claim 2, either directly or indirectly, and are believed to be allowable based upon their dependence from an allowable claim. However, these claims are also believed to allowable on their own merits, in that they disclose additional features not taught or suggested by the prior art.

With the submission of the Reid declaration, there is now meaningful evidence in the record (the only evidence) regarding how the cited art would be understood and interpreted with respect to the present invention by those of ordinary skill in the art. Despite the best efforts of the examiner and the undersigned, it is ultimately the level of skill of the ordinary practitioner which should control the determination of obviousness.

Applicants' attorney has made every effort to place this patent application in condition for allowance. It is therefor requested that this patent application, as a whole, receive favorable reconsideration and that all of the claims be allowed as presently constituted. Should there remain any unanswered questions, the Examiner's is requested to call the Applicant's undersigned attorney at the telephone number indicated below.

Respectfully submitted,



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